



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/534,893	03/24/2000	Joel Lazewatsky	DM6993	2336

7590

04/10/2002

Maureen P O'Brien  
Dupont Pharmaceutical Company  
Legal Patents  
1007 Market Street  
Wilmington, DE 19898

EXAMINER

JONES, DAMERON LEVEST

ART UNIT

PAPER NUMBER

1616

DATE MAILED: 04/10/2002

12

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/534,893

Applicant(s)

LAZEWATSKY, JOEL

Examiner

D. L. Jones

Art Unit

1616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 January 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-58 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-58 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

**RESTRICTION INTO GROUPS**

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-8, 10-16, 18, 19, 33-37, 39-50, and 52-54, drawn to a method of imaging thrombus with compounds that are *structurally similar* to those of Formula IV having R31 = aromatic carbocyclic ring substituted with 1 R10; R10 = NR13C(=O)R13; J = L- or D-isomer of amino acid with formula – N(R3)C(R4)(R5)C(=O); K = L- or D-isomer of amino acid with formula – N(R6)CH(R7)C(=O); L = Y(CH2)vC(=O) wherein Y = NH; M = L or D-amino acid with formula –N(R17)-CH-[(CH(R4))q'-R8]-C(=O); R32 = C(=O); Ln = M'[Y'(CR55R56)f(Z')f'y2]f'-M2 wherein M1 = [(CH2)gZ1]g'-(CR55R56)g'' and M2 = (CR55R56)g''-[Z1(CH2)g]g' wherein g, g', g'', and f are all zero, Y1 = bond; Y2 = NHC(=O); Ch = substituent of formula R40R41N-N=; R40 is heterocycle substituted with 1 R52; R52 is bond to Ln; and AL1 and AL2 = trisubstituted phosphines, classified in class 424, subclass 9.1.
  - II. Claims 1-7, 9-16, 18, 19, 33-36, 38-49, and 51-54, drawn to a method of imaging thrombus with compounds that are *structurally similar* to those of Formula V having R31 = aromatic carbocyclic ring substituted with 1 R10; R10 = NR13C(=O)R13; J = L- or D-isomer of amino acid with formula – N(R3)C(R4)(R5)C(=O); K = L- or D-isomer of amino acid with formula – N(R6)CH(R7)C(=O); L = Y(CH2)vC(=O) wherein Y = NH; M = L or D-amino acid with formula –N(R17)-CH-[(CH(R4))q'-R8]-C(=O); R32 =

Art Unit: 1616

$C(=O)$ ;  $L_n = M'[Y'(CR_{55}R_{56})f(Z')f'y_2]f'-M_2$  wherein  $M_1 = [(CH_2)_gZ_1]g'-(CR_{55}R_{56})g''$  and  $M_2 = (CR_{55}R_{56})g''-[Z_1(CH_2)_g]g'$  wherein  $g, g', g''$ , and  $f$  are all zero,  $Y_1 = \text{bond}$ ;  $Y_2 = NHC(=O)$ ;  $Ch = \text{substituent of formula } R_{40}R_{41}N-N=$ ;  $R_{40}$  is heterocycle substituted with 1  $R_{52}$ ;  $R_{52}$  is bond to  $L_n$ ; and  $AL_1$  and  $AL_2 = \text{aminocarboxylate, classified in class 424, subclass 9.1.}$

III. Claims 1-7, 10-16, 18, 19, 33-36, 39-49, and 52-54, drawn to a method of imaging thrombus with compounds not encompassed by Groups I and II above, classified in class 424, subclass 9.1.

IV. Claims 17, 20-24, 26-32, and 55-58, drawn to a method of imaging pulmonary embolus with compounds that are *structurally similar* to Formula IV having  $R_{31} = \text{aromatic carbocyclic ring substituted with 1 } R_{10}$ ;  $R_{10} = NR_{13}C(=O)R_{13}$ ;  $J = \text{L- or D-isomer of amino acid with formula } -N(R_3)C(R_4)(R_5)C(=O)$ ;  $K = \text{L- or D-isomer of amino acid with formula } -N(R_6)CH(R_7)C(=O)$ ;  $L = Y(CH_2)_vC(=O)$  wherein  $Y = NH$ ;  $M = \text{L or D-amino acid with formula } -N(R_{17})-CH-[(CH(R_4))_q'-R_8]-C(=O)$ ;  $R_{32} = C(=O)$ ;  $L_n = M'[Y'(CR_{55}R_{56})f(Z')f'y_2]f'-M_2$  wherein  $M_1 = [(CH_2)_gZ_1]g'-(CR_{55}R_{56})g''$  and  $M_2 = (CR_{55}R_{56})g''-[Z_1(CH_2)_g]g'$  wherein  $g, g', g''$ , and  $f$  are all zero,  $Y_1 = \text{bond}$ ;  $Y_2 = NHC(=O)$ ;  $Ch = \text{substituent of formula } R_{40}R_{41}N-N=$ ;  $R_{40}$  is heterocycle substituted with 1  $R_{52}$ ;  $R_{52}$  is bond to  $L_n$ ; and  $AL_1$  and  $AL_2 = \text{trisubstituted phosphines, classified in class 424, subclass 9.1.}$

Art Unit: 1616

- V. Claims 17, 20-23, 25-32, and 55-58, drawn to a method of imaging pulmonary embolus with compounds that are *structurally similar* to Formula V having R31 = aromatic carbocyclic ring substituted with 1 R10; R10 = NR13C(=O)R13; J = L- or D-isomer of amino acid with formula – N(R3)C(R4)(R5)C(=O); K = L- or D-isomer of amino acid with formula – N(R6)CH(R7)C(=O); L = Y(CH2)<sup>v</sup>C(=O) wherein Y = NH; M = L or D-amino acid with formula –N(R17)-CH-[(CH(R4))<sup>q</sup>-R8]-C(=O); R32 = C(=O); Ln = M'[Y'(CR55R56)<sup>f</sup>(Z')<sup>f'</sup>y2]<sup>f</sup>-M2 wherein M1 = [(CH2)<sup>g</sup>Z1]<sup>g'</sup>-(CR55R56)<sup>g''</sup> and M2 = (CR55R56)<sup>g''</sup>-[Z1(CH2)<sup>g</sup>]<sup>g'</sup> wherein g, g', g'', and f are all zero, Y1 = bond; Y2 = NHC(=O); Ch = substituent of formula R40R41N-N=; R40 is heterocycle substituted with 1 R52; R52 is bond to Ln; and AL1 and AL2 = aminocarboxylate, classified in class 424, subclass 9.1.
- VI. Claims 17, 20-23, 26-32, and 55-58, drawn to a method of imaging pulmonary embolus with compounds not encompassed by Groups IV and V above, classified in class 424, subclass 9.1.

2. The inventions are distinct, each from the other because of the following reasons:

A. Inventions I, II, and III are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case, the different inventions involve the use of different

Art Unit: 1616

compounds. Thus, the searching of each invention would not render obvious or anticipate compounds encompassed in the other inventions.

B. Inventions IV, V, and VI are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case, the different inventions involve the use of different compounds. Thus, the searching of each invention would not render obvious or anticipate compounds encompassed in the other invention.

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

#### **ELECTION OF SPECIES**

4. Claims 1-58 are generic to a plurality of disclosed patentably distinct species comprising methods of imaging using compounds structurally similar and including those of Formulae IV and V as set forth in Applicant's specification, page 25. In addition, compounds not encompassed by those of Formulae IV and V or derivatives thereof are also being claimed (see claim 6 for example). Applicant is required under 35 U.S.C. 121 to elect a single disclosed species, even though this requirement is traversed.

**Note:** Applicant is respectfully requested to elect a **single** species from one of the groups above and identify all variable associated with the elected species. (i.e., Q, d, Ch, etc.).

5. Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

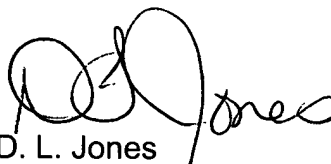
6. A telephone call was not made to request an oral election to the above restriction requirement due to the complexity of the restriction requirement.

7. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to D. L. Jones whose telephone number is (703) 308-4640. The examiner can normally be reached on Mon.-Fri. (alternate Mon.), 6:45 a.m. - 4:15 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jose' Dees can be reached on (703) 308- 4628. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-4556 for regular communications and (703) 308-4556 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1235.



D. L. Jones  
Primary Examiner  
Art Unit 1616

April 5, 2002